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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/047,404	10/19/2001	Jeffrey A. Hubbell	50154/004002	7897
21559	7590	01/07/2005	EXAMINER	
CLARK & ELBING LLP 101 FEDERAL STREET BOSTON, MA 02110			ASINOVSKY, OLGA	
			ART UNIT	PAPER NUMBER

1711

DATE MAILED: 01/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

LD

<b>Office Action Summary</b>	<b>Application N .</b>	<b>Applicant(s)</b>	
	10/047,404	HUBBELL ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Olga Asinovsky	1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 November 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-34 and 62 is/are pending in the application.
- 4a) Of the above claim(s) 10 and 29-33 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11-28, 34 and 62 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 November 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>7 pages</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election without traverse of Group I, claims 1-34 and 62 and the species of a compound including a hydrophilic polymer and further the species of polyethylene glycol in the reply filed on November 26, 2004 is acknowledged.

In light of the elected species of polyethylene glycol for a hydrophilic polymer, the original claims 10 and 29-33 are withdrawn as a non-elected species for further hydrophilic compound.

Claims 1-9, 11-28, 34 and 62 are under examination.

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3, 11-13, 23, 27-28 are rejected under 35 U.S.C. 102(b) as being anticipated by GB 1 348 045.

GB'045 discloses a method for forming polythioethers by reacting episulfides with thiol compounds, page 1, line 36, page 2, lines 5 and 41-57, for the present claim 1. The

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polythiol compounds and episulfides are readable in the present claims 1, 11 and 13.

The polythioether compound can have a thiol group in each end, for the present claims 3 and 12. The polythioether compound is readable in applicants' claimed block copolymer.

3. Claims 1-9, 11-28, 34 and 62 are rejected under 35 U.S.C. 102(b) as being anticipated by Kanemura et al U.S. Patent 5,374,668.

Kanemura discloses a polysulfide resin comprising a reaction of polythiol compound with epoxy and/or episulfide compound, column 2, lines 60-61, column 3, line 53 through column 4, line 53. The epoxy resin can include a reaction product of polyethylene glycol and a compound having episulfide groups. A compound having episulfide group is readable in applicants' claims 1-2 and 13. The hydrophilic polyethylene glycol is readable in applicants' claims 4-5 and 7. A polythiol compound having two or more functional groups is readable in applicants' claims 1-2 and 11, column 4, line 53 through column 6, line 68. The polysulfide-based resin can include ionic surface active agents, column 7, lines 7-15, for the present claim 6.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2, 4-9, 14-22, 24-26, 34 and 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over GB 1,348 045 as applied to claims 1, 3, 11-13, 23, 27-28 above, and further in view of WO 00/44808.

GB 1 348 045 does not disclose a third compound that comprises a group that is reactive to thiols.

WO 00/44808 discloses a composition comprising two or more precursor components having functional groups. At least one component is a strong nucleophile comprising polymer having thiol group, claim 4 at page 93. The polythiol having acrylate functionality is readable in applicants' claims. Other compound is a hydrophilic reactive compound such as polyethylene glycol, claim 7 at page 94 and page 41, lines 15-25, for the present claim 5.

It would have been obvious to one of ordinary skill in the art to modify polythioether compound in GB 1 348 045 by employing a water-soluble polymer such as polyethylene glycol as discloses by WO 00/44808, because a hydrophilic material that is reactive with thiol group is expected in GB 1,348, 045 as being substituents on the radical R having oxygen group, page 2, lines 45 and 50-57.

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The closest prior art to GB 1,348,045 and WO 00/44808 have been discussed above.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Olga Asinovsky whose telephone number is 571-272-1066. The examiner can normally be reached on 9:00 to 5:30 pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jan 03, 2005

Olga Asinovsky  
Examiner  
Art Unit 1711



James J. Seidleck  
Supervisory Patent Examiner  
Technology Center 1700